	Application No.	Applicant(s)
Notice of Allowability	10/674,835	NIELL ET AL.
	Examiner	Art Unit	
	Omar F. Fernández Rivas	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *an after final amendment filed on 5/7/2007*.

2. ☒ The allowed claim(s) is/are *20-22 and 77-79*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 3/24/2006

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

1.   Claims 20-22 and 77-79 are allowed.

Allowable Subject Matter

2.   The following is an examiner's statement of reasons for allowance: claims 20-22

and 77-79 are considered allowable since when reading the claims in light of the

specification, as per MPEP § 2111.01, In re Donaldson Co., Inc., 29 USPQ 2d 1845,

1850 (Fed. Cir. 1994), or In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385 (Fed. Cir.

1983), none of the references of record alone or in combination disclose or suggest the

combination of limitations specified in the independent claims.

The Applicant discloses a method that performs the following functions: stores

the value of a pop pointer; stores data into a memory array of a FIFO memory and

increments a push pointer prior to processing a pop request; processes a pop request

to read data from the FIFO; reads a pop pointer value and a push pointer value;

determines the status of the FIFO in response to the value of the pop pointer, the value

of the push pointer, a high threshold level and a low threshold level where the high

threshold level is responsive to the lesser of a maximum branch resolution latency and

the low threshold level (as defined for example at paragraphs 19, 34, 44-45, 50 and 58);

receives information indicating that the pop request was speculative and the state of the

pop pointer of the FIFO should be restored (as defined for example at paragraphs 34,

42, 45 and 56) and restores the value of the pop pointer in response to this information

(as defined for example at paragraph 58).

Buckenmaier (US Patent #5,388,074) discloses a FIFO memory circuit that includes a data output register connected to the FIFO. The FIFO stores data in a group of memory locations. The memory contains a write pointer to select the next available memory location to write data and a read pointer to provide data from the FIFO via the register connected to the FIFO

Crouse (US Patent #4,831,517) discloses a method for operating a digital processor. A branch and return address (BAROA) instruction is provided to the processor. This instruction is used to correct defective segments of ROM code. Upon execution of the BAROA instruction, the Rom instruction is executed from the memory location specified in the instruction until an exit address field is reached.

Daniel (US Patent Application Publication #2001/0047439) discloses a system for data communications between processors. A first processor contains a memory and a FIFO memory to which a second processor may write data or read data therefrom. The first processor keeps a read pointer and the second processor keeps a read and a write pointer. If the first processor reads data from the FIFO, the read pointer of both the first processor and the second processor are updated. The second processor then compares the its read and write pointer to determine if the FIFO is full.

Dally (US Patent Application Publication # 2003/0070059) discloses a method for performing a conditional vector operation in a processor. An input vector and a condition vector are received. An output vector is produced containing values in the input vector that are equal to values in the condition vector.

O'Connor (US Patent #6,532,531) discloses a method for storing a frame of a method call. An execution environment is stored in a first memory circuit and parameters, variables and operands are stored in a second memory.

The combination of Buckenmaier, Crouse, Daniel, Dally and O'Connor do not teach determining the status of the FIFO in response to the value of a pop pointer, the value of a push pointer, a high threshold level and a low threshold level where the high threshold level is responsive to the lesser of a maximum branch resolution latency and the low threshold level; receiving information indicating that a pop request was speculative and the state of the pop pointer of the FIFO should be restored and restoring the value of the pop pointer in response to this information.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kawai US Patent #5,819,254

Andersen et al US Patent #6,640,231

4.   Claims 20-22 and 77-79 are allowed.

Correspondence Information

5.   Any inquires concerning this communication or earlier communications from the

examiner should be directed to Omar F. Fernández Rivas, who may be reached

Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at

(571) 272-2589 or email omar.fernandezrivas@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

    If attempts to reach the examiner are unsuccessful the Examiner's Supervisor,

David Vincent, may be reached at (571) 272-3080.

    Hand-delivered responses should be delivered to the Receptionist @ (Customer

Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located

on the first floor of the south side of the Randolph Building.

Omar F. Fernández Rivas
Patent Examiner
Artificial Intelligence Art Unit 2129
United States Department of Commerce
Patent & Trademark Office

Thursday, May 24, 2007

OFR

DAVID VINCENT
SUPERVISORY PATENT EXAMINER